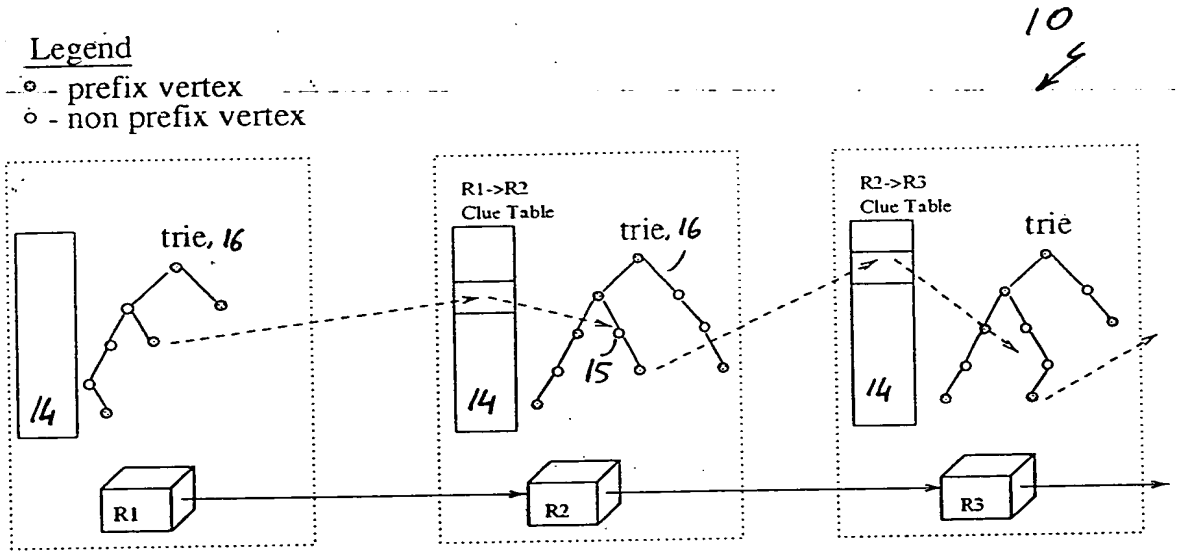

10
Legend
- prefix vertex
- non prefix vertex
trie, 16
14
R1
R1->R2
Clue Table
trie, 16
15
14
R2
R2->R3
Clue Table
trie
14
R3

FIG. 1

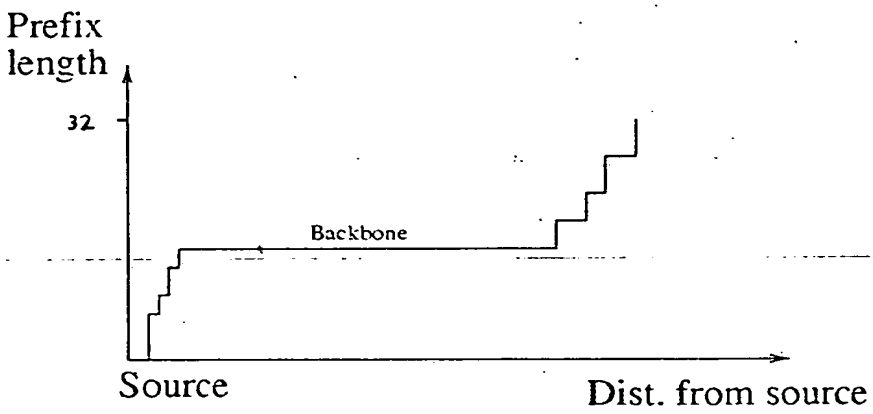

Prefix
length
32
Backbone
Source
Dist. from source

FIG. 2A

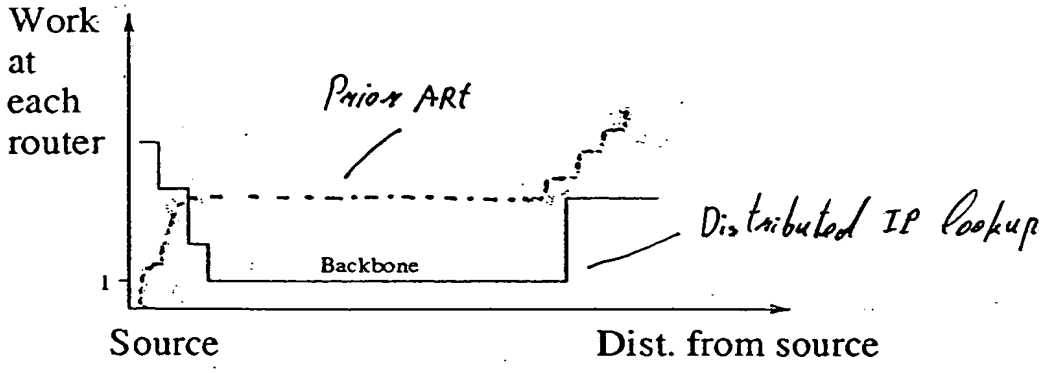

Work
at
each
router
Prior ART
Distributed IP Lookup
Backbone
1
Source
Dist. from source

FIG. 2B

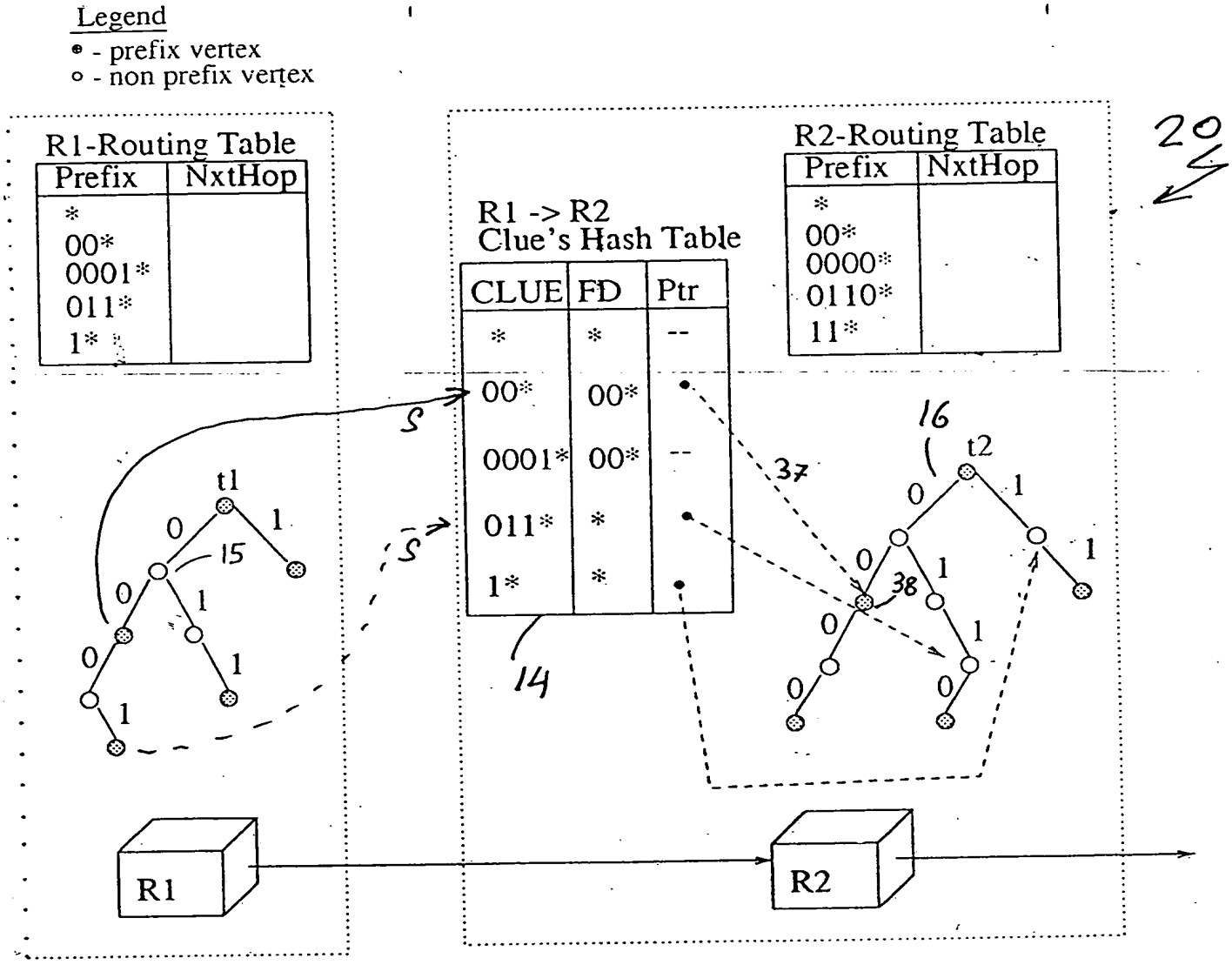

Legend
• - prefix vertex
o - non prefix vertex
R1-Routing Table
Prefix
NxtHop
*
00*
0001*
011*
1*
R1 -> R2
Clue's Hash Table
CLUE
FD
Ptr
00*
0001*
011*
1*
R2-Routing Table
Prefix
NxtHop
*
00*
0000*
0110*
11*
20
16
14
37
38
15
t1
t2
R1
R2

FIG. 3

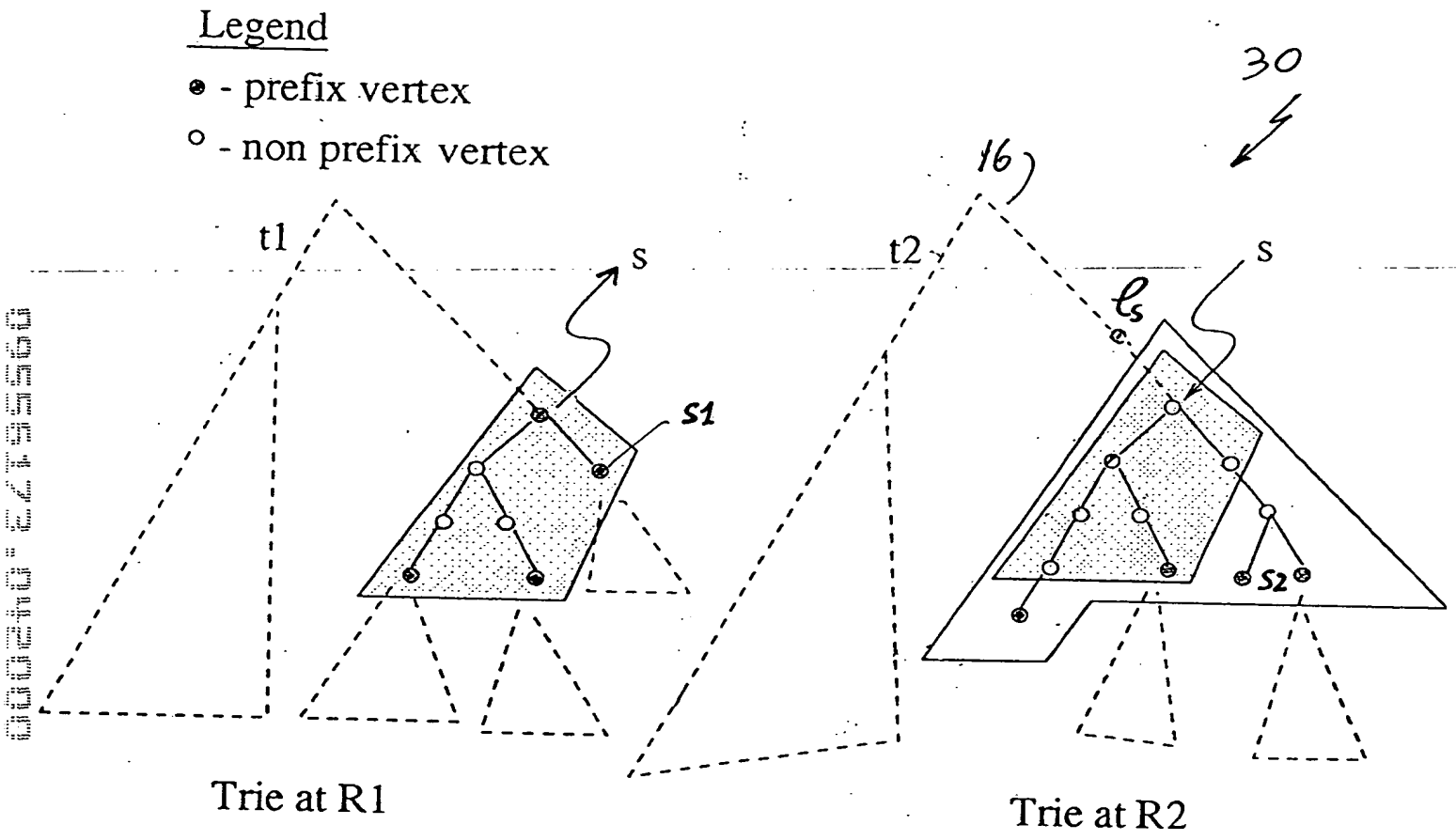

Legend
- prefix vertex
- non prefix vertex
t1
s
S1
Trie at R1
30
16
t2
s
ℓ_s
S2
Trie at R2

FIG. 4

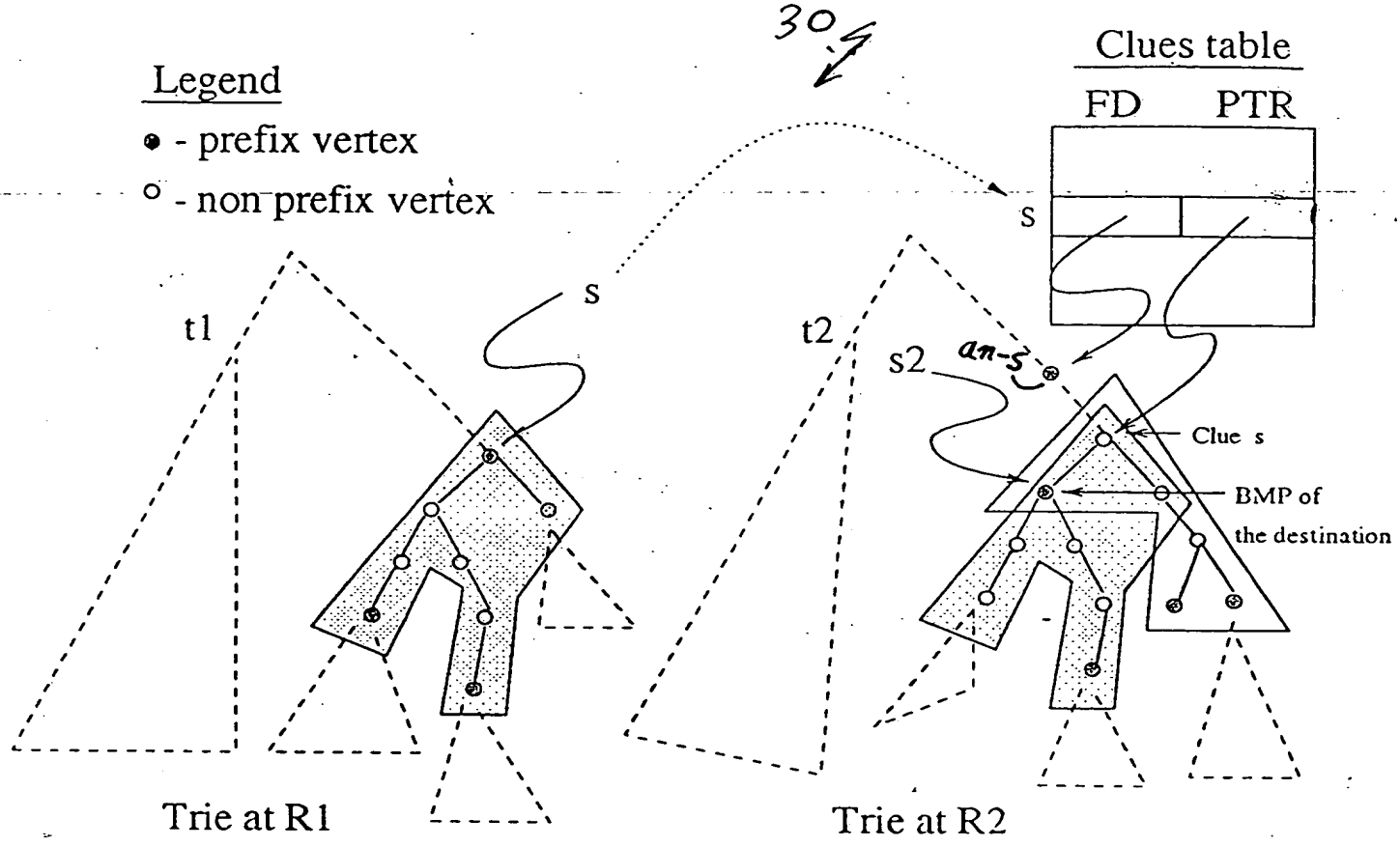

30
Clues table
FD
PTR
Legend
- prefix vertex
- non prefix vertex
s
t1
s
t2
s2
an-s
Clue s
BMP of
the destination
Trie at R1
Trie at R2

FIG. 5

40

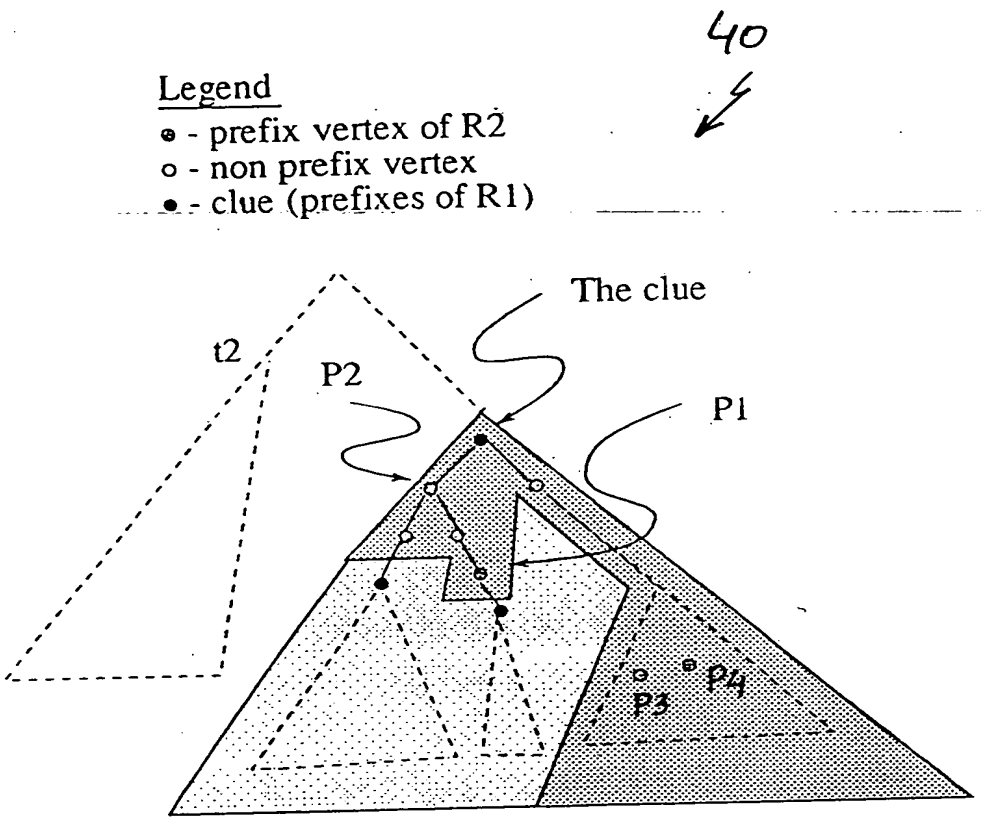
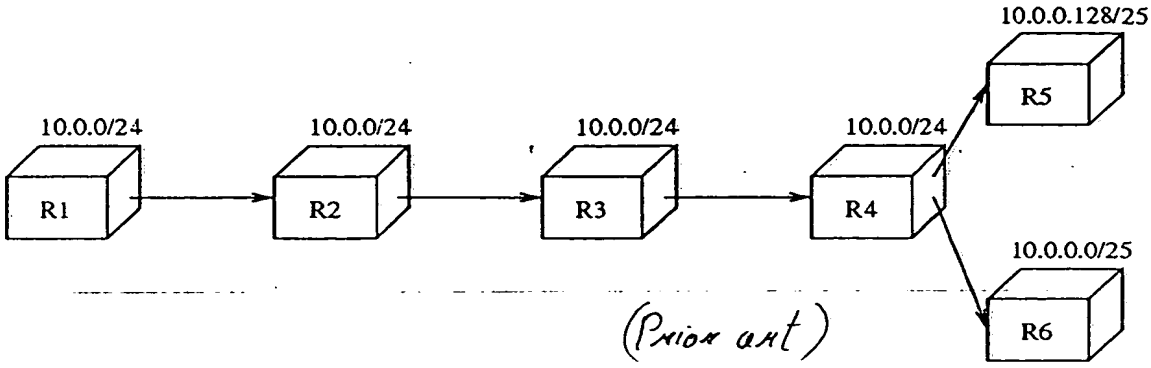

Legend
- prefix vertex of R2
- non prefix vertex
- clue (prefixes of R1)
The clue
t2
P2
P1
P3
P4

FIG. 6



(Prior art)

FIG. 7